

What is claimed is:

1. A catalytic combustor comprising a plurality of corrugated strips alternating with a plurality of flat strips, wherein the corrugated and flat strips define a plurality of channels, wherein some of the channels are coated with catalyst and wherein some of the channels are not coated with catalyst, and wherein a portion of some of the coated channels also include means for inhibiting heat transfer from a coated channel to an uncoated channel.

2. The catalytic combustor of Claim 1, wherein the heat transfer inhibiting means comprises a thermal barrier located on at least a portion of a strip defining one of said coated channels.

3. The catalytic combustor of Claim 1, further comprising an additional strip, coated with catalyst, and located within one of said coated channels.

4. The catalytic combustor of Claim 2, further comprising an additional strip, coated with catalyst, and located within one of said coated channels.

5. The catalytic combustor of Claim 1, wherein the combustor has an inlet end and an outlet end, and wherein the heat transfer inhibiting means is located at the inlet end of the combustor.

6. The catalytic combustor of Claim 1, wherein the combustor has an inlet end and an outlet end, and wherein the additional strip is located at the inlet end of the combustor.

7. The catalytic combustor of Claim 1, wherein the combustor has an inlet end and an outlet end, and wherein the heat transfer inhibiting means, and the additional strip, are located at the inlet end of the combustor.

8. A catalytic combustor comprising a plurality of primary corrugated strips alternating with a plurality of flat strips, wherein the primary corrugated and flat strips define a plurality of channels, wherein some of the channels are coated with catalyst and wherein some of the channels are not coated with catalyst, wherein the combustor has an inlet end and an outlet end, and wherein at least some of the coated channels have, in a vicinity of the inlet end, a thermal barrier disposed between a strip defining the channel and the catalyst coating.

9. The catalytic combustor of Claim 8, wherein the combustor further comprises, in a vicinity of the inlet end, an additional coated corrugated strip having corrugations in phase with, and of lesser amplitude than, corrugations of the primary corrugated strip, wherein the additional strip divides each coated channel into more than one coated channel.

10. The catalytic combustor of Claim 9, wherein each coated channel includes, in a vicinity of the inlet end, at least two additional coated corrugated strips.

11. A catalytic combustor comprising a plurality of primary corrugated strips alternating with a plurality of flat strips, wherein the primary corrugated and flat strips define a plurality of channels, wherein some of the channels are coated with catalyst and wherein some of the channels are not coated with catalyst, wherein the combustor has an inlet end and an outlet end, and wherein the combustor further comprises, in a vicinity of the inlet end, an additional coated corrugated strip having corrugations in phase with, and of lesser amplitude than, corrugations of the primary corrugated strip, wherein the additional strip divides each coated channel into more than one coated channel.

12. The catalytic combustor of Claim 11, wherein each coated

channel includes, in a vicinity of the inlet end, at least two additional coated corrugated strips.

13. The catalytic combustor of Claim 11, wherein at least some of the coated channels have, in a vicinity of the inlet end, a thermal barrier disposed between a strip defining the channel and the catalyst coating.

14. The catalytic combustor of Claim 12, wherein at least some of the coated channels have, in a vicinity of the inlet end, a thermal barrier disposed between a strip defining the channel and the catalyst coating.

15. A catalytic combustor having an inlet end and an outlet end, the combustor having a plurality of channels which are coated with catalyst, and a plurality of channels which are not coated with catalyst, wherein at least some of the coated channels include, only in a vicinity of the inlet end, a thermal barrier.

16. The catalytic combustor of Claim 15, wherein each coated channel has a boundary, and wherein the thermal barrier is disposed along at least a portion of said boundary of the coated channel.

17. A catalytic combustor having an inlet end and an outlet end, the combustor having a plurality of channels which are coated with catalyst, and a plurality of channels which are not coated with catalyst, wherein at least some of the coated channels include, only in a vicinity of the inlet end, a coated catalyst support disposed within the coated channel.

18. A catalytic combustor having an inlet end and an outlet end, the combustor having a plurality of channels which are coated with catalyst, and a plurality of channels which are not coated with catalyst,

wherein at least some of the coated channels include, only in a vicinity of the inlet end, a thermal barrier, and wherein at least some of the coated channels include a coated catalyst support disposed within the coated channel.

19. The catalytic combustor of Claim 18, wherein each coated channel has a boundary, and wherein the thermal barrier is disposed along at least a portion of said boundary of the coated channel.

20. A catalytic combustor comprising a plurality of corrugated strips alternating with a plurality of flat strips, wherein the corrugated and flat strips define a plurality of channels, wherein the combustor has an inlet end and an outlet end, wherein some of the channels are coated with catalyst and wherein some of the channels are not coated with catalyst, wherein a portion of some of the coated channels include, only in a vicinity of the inlet end, a thermal barrier which inhibits heat transfer from a coated channel to an uncoated channel, and wherein the combustor further comprises an additional strip, coated with catalyst, and located within one of said coated channels, in a vicinity of the inlet end.